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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,526	07/24/2007	Jean-Luc Soulard	PF040046	2770

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EXAMINER	
FARAHMAND, ASHIL S	

ART UNIT	PAPER NUMBER
2472	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,526	SOULARD ET AL.	
	Examiner	Art Unit	
	ASHIL FARAHMAND	2472	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 December 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 4-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2,4-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because some of the labels are upside down [See Fig. 3-6]. The Examiner recommends that re-orienting or rotating the objected drawings to look more like Figs. 7 and 9. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

1. Claims 1-2, 4-8 are objected to because of the following informalities:

In claims 1 and 8, the Applicant refers to "said summing" however, it appears that the Applicant is referring to the "accumulating" which occurs earlier in the claims. The Examiner recommends removing "summing" and referring to the limitation as "accumulating."

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 5, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cloutier in view of Upp et al. (US 5,608,731).

Regarding claim 1, Cloutier discloses a device [See Fig. 2] for temporal slaving in a packet data transmission network, wherein each incoming data packet comprises a time label [See abstract and col. 4, ll. 53-57], the device comprising:

a local reception clock [See Fig. 2, element 134];

a means of temporary storage for receiving packets from said network and said storage capacity for recording data received for a predetermined time (IPDV) dependent on characteristics of the network [See Fig. 2, buffer 144; See col. 13, ll. 7-11],

a means [See Fig. 2, device 130 and 134] for regenerating a local reception clock as a function of the time label of the incoming packets [See col. 10, ll. 53-61],

a means for reading the data in the means of temporary storage at an instant dependent on the said predetermined time (IPDV) and on the regenerated local reception clock [See Fig. 2, signal BA; See col. 13, ll. 26-57].

Cloutier does not disclose wherein the means for regenerating a local reception clock comprises - a differentiator for calculating a difference between the time label and the regenerated local reception clock, - a means for accumulating said difference between the time

labels of the incoming data packets and the local reception clock during a period of time and - a decision means for comparing the said summing and the local clock and modifying the regenerated local reception clock according to said comparison.

Upp discloses a differentiator for calculating a difference between a received time label and a regenerated local reception clock [See col. 3, ll. 38-49],

a means for accumulating said difference between the time labels of the incoming data packets and the local reception clock during a period of time [See Fig. 2, element 50; See col. 3, ll. 38-49; Since Upp allows the correction to be done repeatedly, earlier clock corrections are accumulated with later ones] and

comparing said summing and the local clock [See col. 3, ll. 38-49; Upp generates the difference to recover the clock] and

modifying the regenerated local reception clock according to said comparison [See col. 3, ll. 38-49].

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device as disclosed by Cloutier to include a modifying the regenerated local reception clock as disclosed by Upp.

The motivation would be for improved clock recovery.

Regarding claim 8, Cloutier discloses a method of temporal slaving in a device of a packet data transmission network,

wherein said device comprises a local clock [See Fig. 2, element 134] and

each incoming data packet comprises a time label [See abstract and col. 4, ll. 53-57],

said method comprising

a step of temporary storage of the incoming data packets received from said network [See Fig. 2, buffer 144; See col. 13, ll. 7-11],

the data being stored for a predetermined time dependent on the characteristics of the network [See col. 13, ll. 7-36],

a step of regenerating a local reception clock as a function of the time label of the incoming packets [See Fig. 2, device 130 and 134; See col. 10, ll. 53-61],

a step of reading the data in the temporary storage means at an instant dependent on the said predetermined time and on the regenerated local reception clock [See Fig. 2, signal BA; See col. 13, ll. 26-57].

Cloutier does not disclose wherein during the regenerating step, calculating a time difference between the time label and the regenerated local reception clock, accumulating said time difference between the time labels of the incoming data packets and the local reception clock during a period of time and comparing said summing and the local clock and modifying the regenerated local reception clock according to said comparison.

Upp discloses calculating a time difference between a received time label and a regenerated local reception clock [See col. 3, ll. 38-49],

accumulating said time difference between the time labels of the incoming data packets and the local reception clock during a period of time [See col. 3, ll. 38-49; Since Upp allows the correction to be done repeatedly, earlier clock corrections are accumulated with later ones] and

comparing said summing and the local clock [See col. 3, ll. 38-49; Upp generates the difference to recover the clock] and

modifying the regenerated local reception clock according to said comparison [See col. 3, ll. 38-49].

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the method as disclosed by Cloutier to include modifying the regenerated local reception clock as disclosed by Upp.

The motivation would be for improved clock recovery.

Regarding claim 5, Cloutier in view of Upp further discloses wherein additionally comprising a means of reducing the phase noise [See Cloutier, the abstract; Cloutier discloses correcting jitter by reducing phase noise].

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cloutier in view of Upp further in view of Akiyama.

Regarding claim 2, Cloutier in view of Upp does not disclose wherein the means of reading the data in the means of temporary storage are adapted for reading the data in the means of temporary storage when the difference between the said predetermined time and the regenerated local clock is greater than the value of the time label of the next packet to be output from the means of temporary storage.

Akiyama discloses wherein a means of reading the data in a temporary storage is adapted for reading the data in the means of temporary storage when the difference between the said predetermined time and the regenerated local clock is greater than the value of the time label of

the next packet to be output from the means of temporary storage [See Fig. 2; See pages 1-2; See ¶ 18].

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the means for reading data in the storage as disclosed by Cloutier to include reading the data in the means of temporary storage when the difference between the said predetermined time and the regenerated local clock is greater than the value of the time label of the next packet to be output from the means of temporary storage as disclosed by Akiyama.

The motivation would be to reduce opportunities for tampering with time.

5. Claims 4 and 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cloutier in view Upp further in view of Yamada et al. (US 6,675,314 B1).

Regarding claim 4, Cloutier in view of Upp does not disclose wherein additionally comprising a means of reducing the convergence time on start-up.

Yamada discloses a means of reducing a convergence time [See col. 9, ll. 38-48].

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device as disclosed by Cloutier in view of Upp to include a means of reducing the convergence time on start-up as disclosed by Yamada.

Regarding claim 6, Cloutier in view of Upp further in view of Yamada further discloses wherein the means of reducing the phase noise comprises a digital low-pass filter [See Cloutier, col. 3, ll. 13-23; Cloutier discloses reducing phase noise using a low pass filter].

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cloutier in view of Upp further in view of Lim et al. (US 6,466,547 B1).

Regarding claim 7, Cloutier in view of Upp does not disclose wherein additionally comprising a means of generating artificial noise.

Lim discloses a means of generating artificial noise [See claim 12, limitation 8].

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device as disclosed by Cloutier in view of Upp to include a means of generating artificial noise as disclosed by Lim.

The motivation would be to perform testing.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ASHIL FARAHMAND whose telephone number is (571)270-7079. The examiner can normally be reached on Monday to Friday, 8AM-4PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William Trost/
Supervisory Patent Examiner, Art Unit 2472

AF